



Climate resilient farming and forestry systems and water management

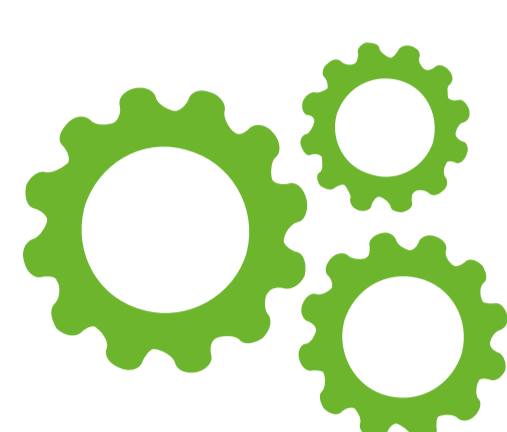


AGRI
Innovation summit 2019

Operational Group

Les ArboNovateurs, for resilience in fruit growing and fruit growers proud of their craft.

Des ArboNovateur® pour une arboriculture résiliente et des arboriculteurs fiers de leur métier



Practical problem

Improving water and nitrogen management in fruit production



Partners

GIEE Arbonovateur (farmers association) CEFEL (research institute) Chambre d'Agriculture de Tarn et Garonne (farmers organisation)



Calendar

Start: 01/01/2015
End: 01/01/2018



Budget

Total amount:
€334,957

Objectives of the project

The project is structured around two issues: – “produce differently” through a system approach that makes it possible to reconcile economic performance and agro-ecological practices based on the organic farming model. – organization of events to present our activities to local consumers.

Main activities

In particular, four actions implemented by the GIEE ArboNovateur® require multi-partner work around innovation and research-action. 1. Water management of orchards in the territory is a strong issue for the different actors in a deficit water catchment area, particularly in dry periods. 2. Create a method to adapt nitrogen fertilization to soil and climate conditions 3. Looking for innovating solutions to limit the use of pesticide (DEPHY farm network of Tarn et Garonne). 4. The perception by society in the territory is a major problem that requires an innovative approach.

Expected results

Improved water and nitrogen management through the choice of more adequate irrigation systems, designing decision tools. And by enhancing their efficiency, thus adjusting the water and nitrogen quantity to the needs. Nitrogen management is delicate for perennial plants. The aim is to achieve satisfactory development of the plant in terms of vigor and yield, while guaranteeing quality, depending on the production objective sought.

Results so far/first lessons

Understanding soil functioning to improve water and nitrogen feeding. More than 80% of the nutritional problems in an orchard are related to soil functioning problems. To understand it, four steps are essential in the Arbonovateurs Operational group Step 1: Soil conductivity mapping Step 2: soil Profile Step 3: Soil analysis Step 4: Installation of irrigation control stations in the orchard, based on analyses. The water and nitrogen savings in optimized management are around 30%, i.e. 1000 m3/ha of water and 30 kg of nitrogen on average for several years in apples.

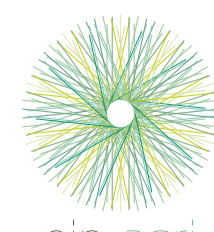
Who will benefit

Local producers organizations and regional authorities who are not partners in the Operational Group are also sharing results to reach farmers, local communities and consumers. The Arbonovateurs' partners want to show consumers that they are producing healthy and safe food in a sustainable way.

Supported by:



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